Montana Department of
ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU

Agency Use	
Permit No.:	
Date Rec'd	2/3/9
Amount Rec'd	0.00
Check No.	
Rec'd By	CB

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A - NMP Status *(Check one):*

[X] New — No prior NMP submitted for this site.

[ ] Modification — Change or update to existing NMP.

Permit Number: MT G010137 (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name NORMAN HAALAND BLUE CREEK CATTLE FEEDERS

Site Location 24 BENDER ROAD

Nearest City or Town BILLINGS County YELLOWSTONE

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name NORMAN HAALAND

Mailing Address P.O. BOX 97

City, State, and Zip Code SHEPHERD, MT 59079

Phone Number (406) 855-4832

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PERMITTING & COMPLIANCE DIV.

Section D - NMP Minimum Elem ts:

1. Livestock Statistics

Animal Type and number of animals	*# of Days on Site (per year)*	*Annual Manure Production (tons, cu. yds.or gal)*
1. FINISHING CATTLE 7371 HEAD	701,724	18,946.548 TONS
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:

TOTAL HEAD DAYS x 54#

2. Manure Handling

Describe manure handling at the facility:

LOADER LOADS SPREADER TRUCKS AND SPREAD TO FIELDS OR TO T-BONE

Frequency of Manure Removal from confinement areas:

ANNUALLY

Is this manure temporarily stored in any location other than the confinement area? [X] Yes [ ] No

If so then how and where? HAULED TO T-BONE STOCK PILE

Is manure stored on impervious surface? [ ] Yes [X] No

If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structure (name/type)	*Length (ft)*	*Width (ft)*	*Depth (ft)*	*Volume (cubic ft or gallons)*
1. LAGOON 1	135'	40'	9'	48,600 cubic feet
2. LAGOON 2	500'	20'	9'	90,000 cubic feet
3. LAGOON 3	600'	200'	14'dike	1,680,000 cubic feet
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

HAULED TO BAKER COMMODITIES

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

√

Berms & Ditches

6. Prohibiting Animals and Waste from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

Dikes & Berms - control flow to Lagoons
Pump stations at lagoon I to pump to Lagoon II & Lagoon III

7. Chemicals and Contaminants

Describe how chemicals and other contaminants are handled on-site:

NONE

8. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

PEN 24W and pens 1 thru 4 ARE NATURAL FLOW TO LAGOON 1

LAGOON 1 IS A NATURAL FLOW TO LAGOON 2

LAGOON 2 IS PUMPED TO LAGOON 3

PENS 5 THRU PEN 23 are a NATURAL FLOW TO LAGOON 3

LAGOON 3 IS PUMPED TO THE HAY FIELD

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	yes/no	Rotational grazing	yes/no
Conservation or reduced tillage	yes/no	Manure injection or incorporation	yes/no
Terraces or other water control structures	yes/no	Contour plantings	yes/no
Riparian buffers or vegetative filter strips	yes/no	Winter "scavenger" or cover crops	yes/no

Other examples

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

Certify the document addresses the following requirements:

Implementation of the NMP:	☒ Yes	☐ No
Facility operation and maintenance:	☒ Yes	☐ No
Record keeping and reporting:	☒ Yes	☐ No
Sample collection and analysis:	☒ Yes	☐ No
Manure transfer:	☒ Yes	☐ No

Provide name, date and location of most recent documentation:

New NMP 2009 - All records kept at T-Bone Feeders
Permit #MTG010137

If your answer to any of the above question is no, provide explanation

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☐ No If no, then provide an explanation of how animal waste at this site are managed.

☒ Yes If yes, then the information requested in Section E must be provided.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

spreader trucks Average Net Loaded Weight (lbs.) x 21.8
Distance Traveled (ft.) x Distance between Travel (ft.)

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type):	
Crop 1 (year 1 or ?) plant species	hay barley
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	2 ton hay
N Content of soil as nitrate (lbs/acre or ppm)	28
P Content of soil as P_2O_5 (lbs/acre or ppm)	11-12
Time of Year When Application will Occur (month)	Oct-Nov
Application frequency (per year by month)	yearly
Form of manure (liquid/solid)	solid
Method of Application	spreader trucks
Is manure incorporated or broadcast?	incorporated
Frequency of Application (yearly, biannual, etc.?)	yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

☒ Method A – Representative Soil Sample
☐ Method B – Phosphorus Index

Method A – Representative Soil Sample

a) Obtain one or more representative soil sample(s) from the field.
b) Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
c) Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
Olsen P Soil Test Result (ppm)	***Application Basis***
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

a) Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
b) Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
Total Phosphorus Index Value	***Site Vulnerability to Phosphorus Loss***
<11	Low
11-21	Medium
22-43	High
>43	Very High

c) Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
Site Vulnerability to Phosphorus Loss	***Application Basis***
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

d) The permittee will complete th. *lutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9		
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable		
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)		
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre		
(-)	Nutrients supplied in irrigation water, lbs/acre		
	= Additional Nutrients Needed, lbs/acre		
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)		
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)		
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal		
	Additional Nutrients needed, lbs/acre (calculated above)		
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)		
	= Manure Application Rate, tons/acre or 1,000 gal/acre		

Comments:

Currently obtaining field soil samples to determine carryover, if any, from previous manure spreading and calculating needs for upcoming crop year

Section F - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
NORMAN HAALAND	
B. Title (Type or Print) OWNER	**C. Phone No.** 406-373-6006
D. Signature Norman Haaland	**E. Date Signed** 1-29-2009

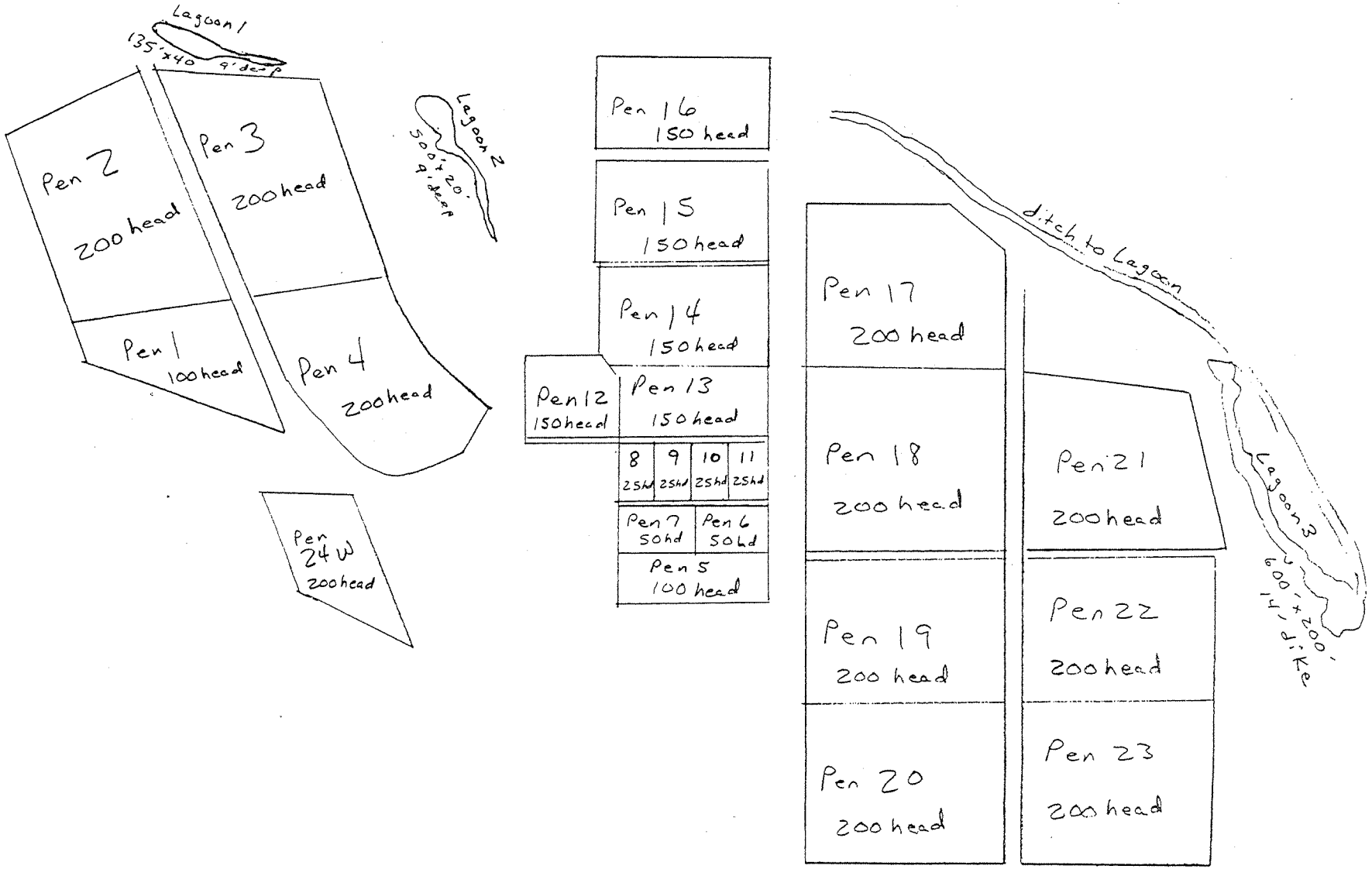
Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED

FEB 03 2009

DEQ/WPB
PERMITTING & COMPLIANCE DIV.


Lagoon 1
135' x 40'
9' deep
Pen 2
200 head
Pen 3
200 head
Pen 1
100 head
Pen 4
200 head
Pen 24 W
200 head
Lagoon 2
500' x 20'
9' deep
Pen 16
150 head
Pen 15
150 head
Pen 14
150 head
Pen 12
150 head
Pen 13
150 head
8
25 hd
9
25 hd
10
25 hd
11
25 hd
Pen 7
50 hd
Pen 6
50 hd
Pen 5
100 head
ditch to Lagoon
Pen 17
200 head
Pen 18
200 head
Pen 19
200 head
Pen 20
200 head
Pen 21
200 head
Pen 22
200 head
Pen 23
200 head
Lagoon 3
600' x 200'
14' deep

BLUE CREEK CATTLE FEEDERS
GALLONS OF LIQUID WATSE
2008

LAGOON #2 PUMPS TO LAGOON #2

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/23/2008	9:00 AM	9:00 AM	24	25	36000
5/24/2008	9:00 AM	9:00 AM	24	25	36000
5/25/2008	9:00 AM	7:00 AM	22	25	33000
10/13/2008	8:00 AM	8:00 AM	48	25	72000
TOTAL'S			118		177000

LAGOON #3 PUMPED TO TRACT 8466 FARM 1729 11 2S 26

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/22/2008	8:00 AM	4:00 PM	8	50	24000
5/23/2008	7:00 AM	6:00 PM	11	50	33000
5/24/2008	NOON	11:00 PM	11	50	33000
5/26/2008	6:00 AM	4:00 PM	10	50	30000
5/27/2008	7:00 AM	1:00 PM	6	50	18000
10/13/2008	2:30 PM	8:00 AM	65.5	50	196500
10/22/2008	8:00 AM	4:00 PM	8	50	24000
TOTAL'S			119.5		358500

GALLONS PER ACRE 3585

BLUE CREEK CATTLE FEEDERS

CATTLE MANURE CALCULATION IN LOT

MONTH	HEAD COUNT IN LOT	HEAD DAYS IN LOT	CATTLE WT IN plus CATTLE OUT WT
1/2008	237	88191	1293971
2/2008	225	52296	1858122
3/2008	1348	36396	2266023
4/2008	1174	58090	1082388
5/2008	234	70660	1019340
6/2008	257	41363	781318
7/2008	125	36218	498343
8/2008	1454	23790	2301208
9/2008	454	50149	1381787
10/2008	901	74193	1677706
11/2008	315	85357	964099
12/2008	647	85021	1794478
	7371	701724	16918783

16918783# / 7371 HD / 2 = 1148 AVG.
701724 X 54# = 37,893,096 / 2000 = 18,946.548 TONS

Blue Creek

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 12 km S of Billings, Montana, United States 23 Aug 1996

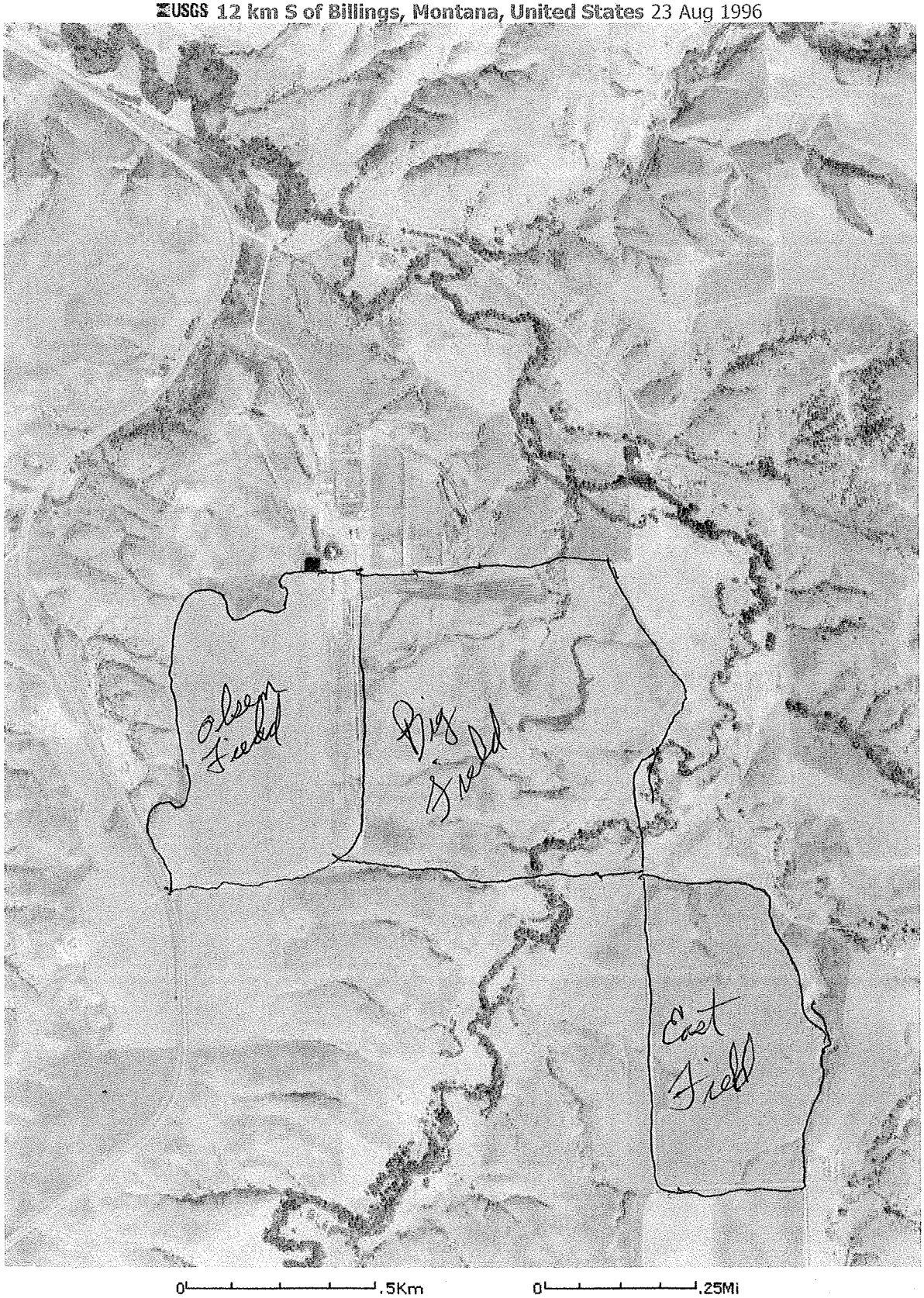


Image courtesy of the U.S. Geological Survey

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Por

USGS **11 km S of Billings, Montana, United States** 23 Aug 1996

Image courtesy of the U.S. Geological Survey

Montana Department of
ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU

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FORM
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Section A - NMP Status *(Check one):*

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Permit Number: MT G01 0137 (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name NORMAN HAALAND BLUE CREEK CATTLE FEEDERS

Site Location 24 BENDER ROAD

Nearest City or Town BILLINGS County YELLOWSTONE

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name NORMAN HAALAND

Mailing Address P.O. BOX 97

City, State, and Zip Code SHEPHERD, MT 59079

Phone Number (406) 855-4832

RECEIVED
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6. Prohibiting Animals and Waste from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

Ditches & Berms - control flow to Lagoons
Pump stations at lagoon I to pump to Lagoon II & Lagoon III

7. Chemicals and Contaminants

Describe how chemicals and other contaminants are handled on-site:

NONE

8. Best Management Practice (BMPS)

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Plant sampling/tissue analysis	yes/no	Rotational grazing	yes/no
Conservation or reduced tillage	yes/no	Manure injection or incorporation	yes/no
Terraces or other water control structures	yes/no	Contour plantings	yes/no
Riparian buffers or vegetative filter strips	yes/no	Winter "scavenger" or cover crops	yes/no

Other examples

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

Certify the document addresses the following requirements:

Implementation of the NMP:	☒ Yes	☐ No
Facility operation and maintenance:	☒ Yes	☐ No
Record keeping and reporting:	☒ Yes	☐ No
Sample collection and analysis:	☒ Yes	☐ No
Manure transfer:	☒ Yes	☐ No

Provide name, date and location of most recent documentation:

New NMP 2009 - All records kept at T-Bone Feeders
Permit #HMT010137

If your answer to any of the above question is no, provide explanation

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☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type):	
Crop 1 (year 1 or ?) plant species	hay barley
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	2 ton hay
N Content of soil as nitrate (lbs/acre or ppm)	28
P Content of soil as P_2O_5 (lbs/acre or ppm)	11-12
Time of Year When Application will Occur (month)	Oct-Nov
Application frequency (per year by month)	yearly
Form of manure (liquid/solid)	solid
Method of Application	spreader trucks
Is manure incorporated or broadcast?	incorporated
Frequency of Application (yearly, biannual, etc.?)	yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

☒ Method A – Representative Soil Sample
☐ Method B – Phosphorus Index

Method A – Representative Soil Sample

a) Obtain one or more representative soil sample(s) from the field.
b) Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
c) Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
Olsen P Soil Test Result (ppm)	***Application Basis***
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

a) Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
b) Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
Total Phosphorus Index Value	***Site Vulnerability to Phosphorus Loss***
<11	Low
11-21	Medium
22-43	High
>43	Very High

c) Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
Site Vulnerability to Phosphorus Loss	***Application Basis***
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

d) The permittee will complete th. *lutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9		
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable		
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)		
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre		
(-)	Nutrients supplied in irrigation water, lbs/acre		
	= Additional Nutrients Needed, lbs/acre		
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)		
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)		
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal		
	Additional Nutrients needed, lbs/acre (calculated above)		
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)		
	= Manure Application Rate, tons/acre or 1,000 gal/acre		

Comments:

Currently obtaining field soil samples to determine carryover if any from previous manure spreading and calculating needs for upcoming crop year

Section F - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
NORMAN HAALAND	
B. Title (Type or Print) OWNER	**C. Phone No.** 406-373-6006
D. Signature Norman Haaland	**E. Date Signed** 1-29-2009

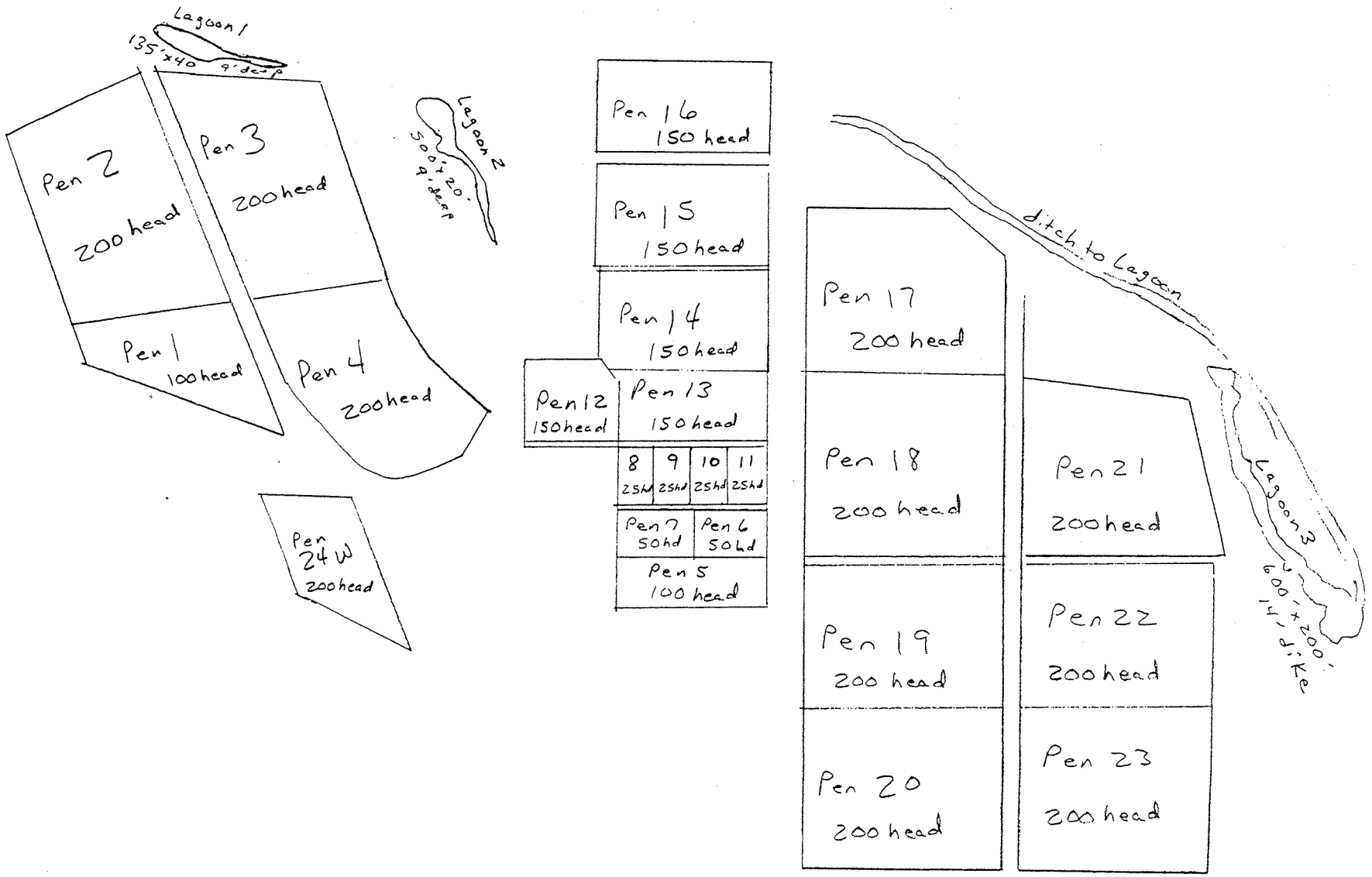
Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED

FEB 03 2009

DEQ/WPB
PERMITTING & COMPLIANCE DIV.


Lagoon 1
135' x 40'
9' deep
Pen 2
200 head
Pen 3
200 head
Pen 1
100 head
Pen 4
200 head
Pen 24 W
200 head
Lagoon 2
500' x 20'
9' deep
Pen 16
150 head
Pen 15
150 head
Pen 14
150 head
Pen 12
150 head
Pen 13
150 head
8
25 hd
9
25 hd
10
25 hd
11
25 hd
Pen 7
50 hd
Pen 6
50 hd
Pen 5
100 head
ditch to Lagoon
Pen 17
200 head
Pen 18
200 head
Pen 19
200 head
Pen 20
200 head
Pen 21
200 head
Pen 22
200 head
Pen 23
200 head
Lagoon 3
600' x 200'
14' deep

BLUE CREEK CATTLE FEEDERS
GALLONS OF LIQUID WATSE
2008

LAGOON #2 PUMPS TO LAGOON #2

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/23/2008	9:00 AM	9:00 AM	24	25	36000
5/24/2008	9:00 AM	9:00 AM	24	25	36000
5/25/2008	9:00 AM	7:00 AM	22	25	33000
10/13/2008	8:00 AM	8:00 AM	48	25	72000
TOTAL'S			118		177000

LAGOON #3 PUMPED TO TRACT 8466 FARM 1729 11 2S 26

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/22/2008	8:00 AM	4:00 PM	8	50	24000
5/23/2008	7:00 AM	6:00 PM	11	50	33000
5/24/2008	NOON	11:00 PM	11	50	33000
5/26/2008	6:00 AM	4:00 PM	10	50	30000
5/27/2008	7:00 AM	1:00 PM	6	50	18000
10/13/2008	2:30 PM	8:00 AM	65.5	50	196500
10/22/2008	8:00 AM	4:00 PM	8	50	24000
TOTAL'S			119.5		358500

GALLONS PER ACRE 3585

BLUE CREEK CATTLE FEEDERS

CATTLE MANURE CALCULATION IN LOT

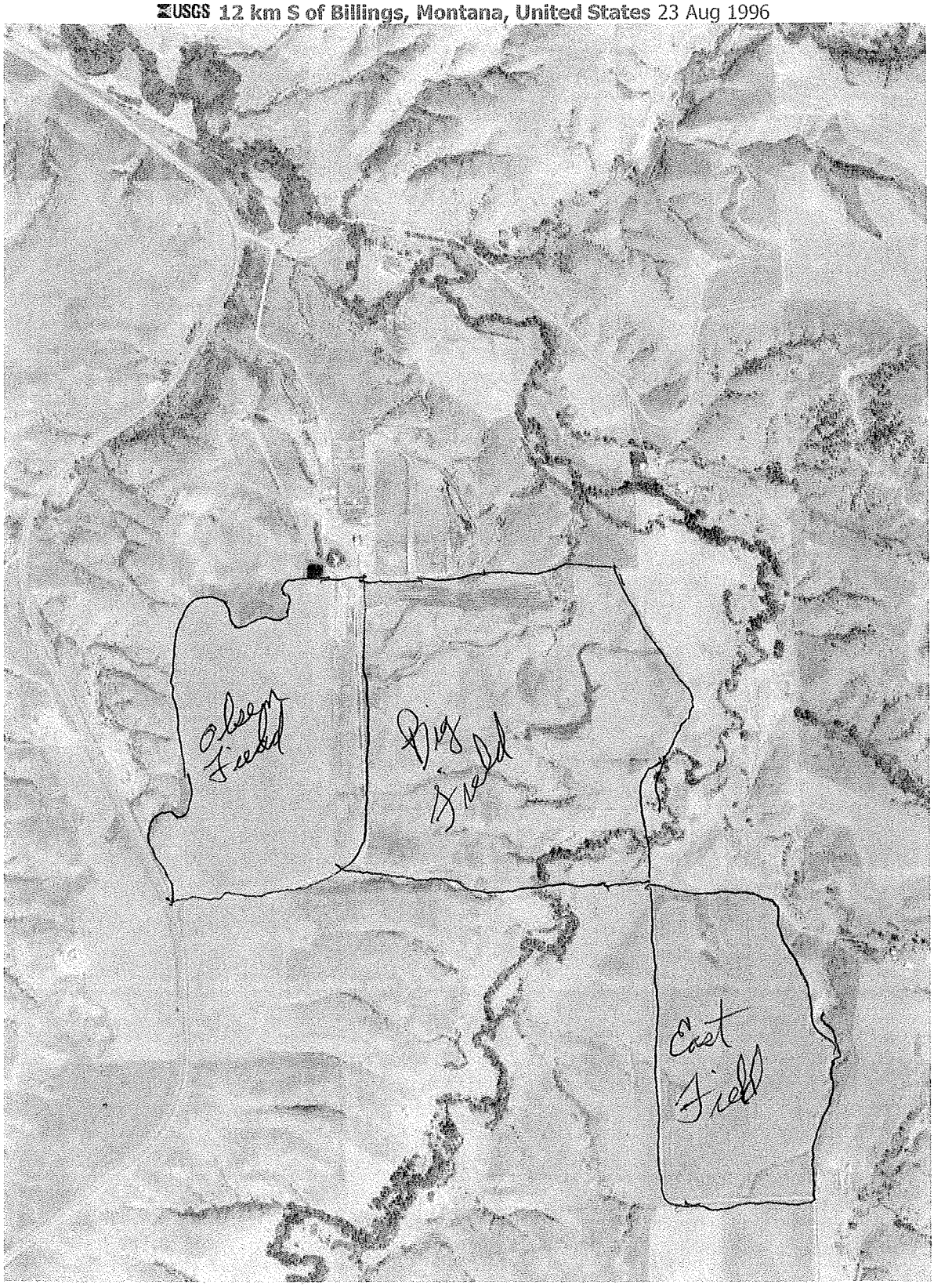
MONTH	HEAD COUNT IN LOT	HEAD DAYS IN LOT	CATTLE WT IN plus CATTLE OUT WT
1/2008	237	88191	1293971
2/2008	225	52296	1858122
3/2008	1348	36396	2266023
4/2008	1174	58090	1082388
5/2008	234	70660	1019340
6/2008	257	41363	781318
7/2008	125	36218	498343
8/2008	1454	23790	2301208
9/2008	454	50149	1381787
10/2008	901	74193	1677706
11/2008	315	85357	964099
12/2008	647	85021	1794478
	7371	701724	16918783

16918783# / 7371 HD / 2 = 1148 AVG.
701724 X 54# = 37,893,096 / 2000 = 18,946.548 TONS

Blue Creek

Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 12 km S of Billings, Montana, United States 23 Aug 1996



0 .5Km 0 .25Mi

Image courtesy of the U.S. Geological Survey

USGS **11 km S of Billings, Montana, United States** 23 Aug 1996

Image courtesy of the U.S. Geological Survey

Montana Department of
ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU

Agency Use	
Permit No.:	
Date Rec'd	2/3/9
Amount Rec'd	0.00
Check No.	
Rec'd By	CB

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A - NMP Status *(Check one):*

☒ New — No prior NMP submitted for this site.

☐ Modification — Change or update to existing NMP.

Permit Number: MTG010137 (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name NORMAN HAALAND BLUE CREEK CATTLE FEEDERS

Site Location 24 BENDER ROAD

Nearest City or Town BILLINGS County YELLOWSTONE

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name NORMAN HAALAND

Mailing Address P.O. BOX 97

City, State, and Zip Code SHEPHERD, MT 59079

Phone Number (406) 855-4832

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PERMITTING & COMPLIANCE DIV.

Section D - NMP Minimum Elements:

1. Livestock Statistics

Animal Type and number of animals	*# of Days on Site (per year)*	*Annual Manure Production (tons, cu. yds.or gal)*
1. FINISHING CATTLE 7371 HEAD	701,724	18,946.548 TONS
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:

TOTAL HEAD DAYS x 54#

2. Manure Handling

Describe manure handling at the facility:

LOADER LOADS SPREADER TRUCKS AND SPREAD TO FIELDS OR TO T-BONE

Frequency of Manure Removal from confinement areas:

ANNUALLY

Is this manure temporarily stored in any location other than the confinement area? [X] Yes [ ] No

If so then how and where? HAULED TO T-BONE STOCK PILE

Is manure stored on impervious surface? [ ] Yes [X] No

If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structure (name/type)	*Length (ft)*	*Width (ft)*	*Depth (ft)*	*Volume (cubic ft or gallons)*
1. LAGOON 1	135'	40'	9'	48,600 cubic feet
2. LAGOON 2	500'	20'	9'	90,000 cubic feet
3. LAGOON 3	600'	200'	14'dike	1,680,000 cubic feet
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

HAULED TO BAKER COMMODITIES

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

Berms & Ditches

6. Prohibiting Animals and Waste from Contact with State Waters
Describe how animals and wastes are prohibited from direct contact with state waters:

Ditches & Berms - control flow to Lagoons
Pump stations at lagoon I to pump to Lagoon II & Lagoon III

7. Chemicals and Contaminants
Describe how chemicals and other contaminants are handled on-site:

NONE

8. Best Management Practice (BMPS)
Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

PEN 24W and pens 1 thru 4 ARE NATURAL FLOW TO LAGOON 1

LAGOON 1 IS A NATURAL FLOW TO LAGOON 2

LAGOON 2 IS PUMPED TO LAGOON 3

PENS 5 THRU PEN 23 are a NATURAL FLOW TO LAGOON 3

LAGOON 3 IS PUMPED TO THE HAY FIELD

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	yes/(no)	Rotational grazing	(yes)/no
Conservation or reduced tillage	yes/(no)	Manure injection or incorporation	(yes)/no
Terraces or other water control structures	yes/(no)	Contour plantings	yes/(no)
Riparian buffers or vegetative filter strips	yes/(no)	Winter "scavenger" or cover crops	yes/(no)

Other examples

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

Certify the document addresses the following requirements:

Implementation of the NMP:	☒ Yes	☐ No
Facility operation and maintenance:	☒ Yes	☐ No
Record keeping and reporting:	☒ Yes	☐ No
Sample collection and analysis:	☒ Yes	☐ No
Manure transfer:	☒ Yes	☐ No

Provide name, date and location of most recent documentation:

New NMP 2009 - All records kept at T-Bone Feeders
Permit #HPM010137

If your answer to any of the above question is no, provide explanation

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☐ No If no, then provide an explanation of how animal waste at this site are managed.

☒ Yes If yes, then the information requested in Section E must be provided.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

spreader trucks $\frac{\text{Average Net Loaded Weight (lbs.)} \times 21.8}{\text{Distance Traveled (ft.)} \times \text{Distance between Travel (ft.)}}$

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

Crops and Manure	
Field Name and spreadable acres for each (for fields with identical crops and soils type):	
Crop 1 (year 1 or ?) plant species	hay barley
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	2 ton hay
N Content of soil as nitrate (lbs/acre or ppm)	28
P Content of soil as P_2O_5 (lbs/acre or ppm)	11-12
Time of Year When Application will Occur (month)	Oct-Nov
Application frequency (per year by month)	yearly
Form of manure (liquid/solid)	solid
Method of Application	spreader trucks
Is manure incorporated or broadcast?	incorporated
Frequency of Application (yearly, biannual, etc.?)	yearly
Crop 2	
Irrigated (Y/N)	
Yield Goal (ton/ac or bushel/ac)	
N Content of soil as Nitrate (lbs/acre or ppm)	
P Content of soil as P_2O_5 (lbs/acre or ppm)	
Time of Year When Application will Occur (month)	
Application frequency (per year, by month)	
Form of manure (liquid/solid)	
Method of Application	
Is manure broadcast, injected or incorporated?	
Frequency of Application (Annual, Biannual, ,etc?)	

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

☒ Method A – Representative Soil Sample
☐ Method B – Phosphorus Index

Method A – Representative Soil Sample

a) Obtain one or more representative soil sample(s) from the field.
b) Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
c) Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
Olsen P Soil Test Result (ppm)	***Application Basis***
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

a) Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
b) Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
Total Phosphorus Index Value	***Site Vulnerability to Phosphorus Loss***
<11	Low
11-21	Medium
22-43	High
>43	Very High

c) Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
Site Vulnerability to Phosphorus Loss	***Application Basis***
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

d) The permittee will complete th. *lutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
	Nutrient Budget	***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9		
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable		
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)		
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre		
(-)	Nutrients supplied in irrigation water, lbs/acre		
	= Additional Nutrients Needed, lbs/acre		
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)		
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)		
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal		
	Additional Nutrients needed, lbs/acre (calculated above)		
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)		
	= Manure Application Rate, tons/acre or 1,000 gal/acre		

Comments:

Currently obtaining field soil samples to determine carryover if any from previous manure spreading and calculating needs for upcoming crop year

Section F - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

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- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)	
NORMAN HAALAND	
B. Title (Type or Print) OWNER	**C. Phone No.** 406-373-6006
D. Signature Norman Haaland	**E. Date Signed** 1-29-2009

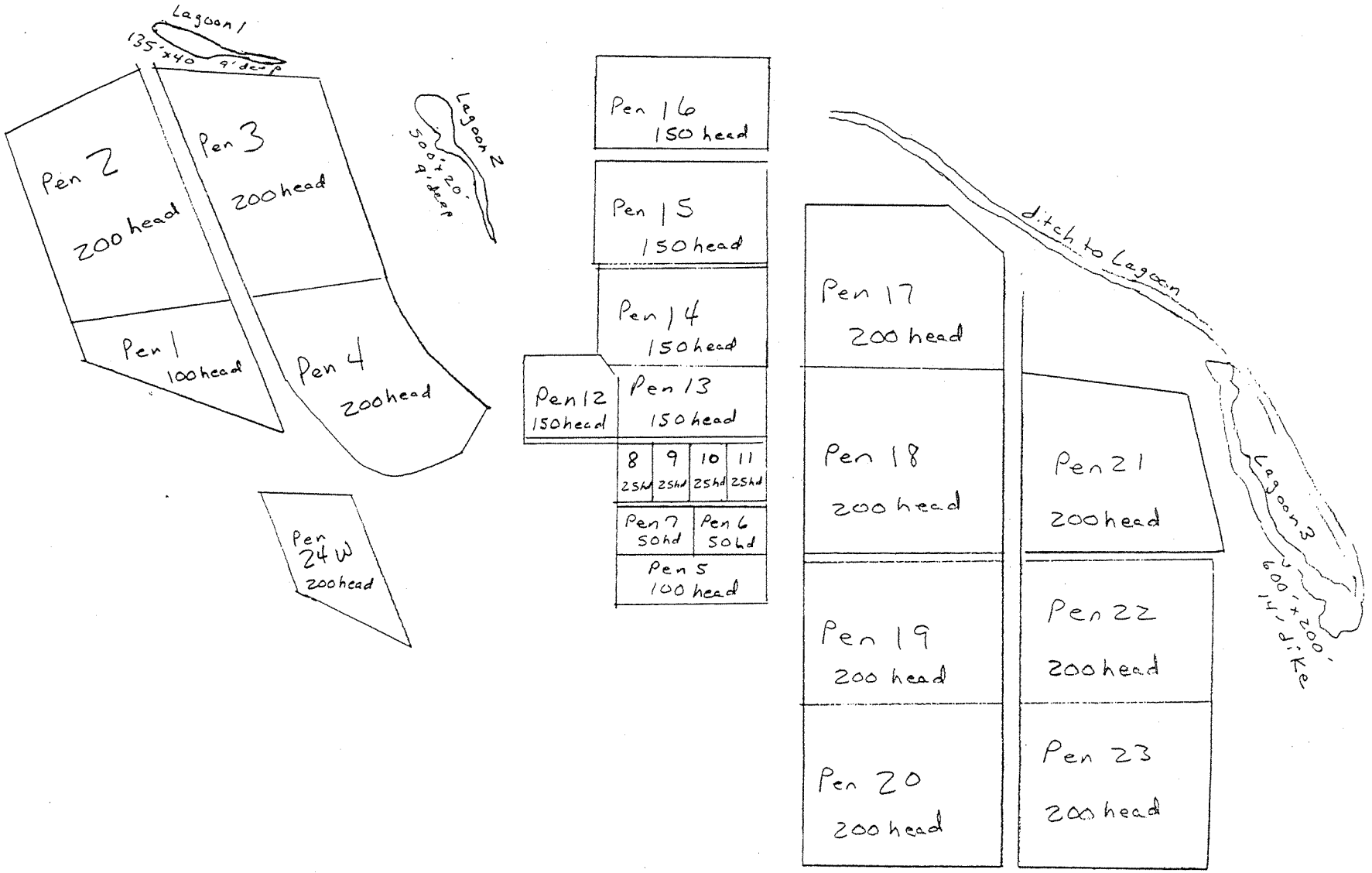
Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED

FEB 03 2009

DEQ/WPB
PERMITTING & COMPLIANCE DIV.


Lagoon 1
135' x 40'
9' deep
Pen 2
200 head
Pen 3
200 head
Pen 1
100 head
Pen 4
200 head
Pen 24 W
200 head
Lagoon 2
300' x 20'
9' deep
Pen 16
150 head
Pen 15
150 head
Pen 14
150 head
Pen 12
150 head
Pen 13
150 head
8
25 hd
9
25 hd
10
25 hd
11
25 hd
Pen 7
50 hd
Pen 6
50 hd
Pen 5
100 head
ditch to Lagoon
Pen 17
200 head
Pen 18
200 head
Pen 19
200 head
Pen 20
200 head
Pen 21
200 head
Pen 22
200 head
Pen 23
200 head
Lagoon 3
600' x 200'
14' dike

BLUE CREEK CATTLE FEEDERS
GALLONS OF LIQUID WATSE
2008

LAGOON #2 PUMPS TO LAGOON #2

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/23/2008	9:00 AM	9:00 AM	24	25	36000
5/24/2008	9:00 AM	9:00 AM	24	25	36000
5/25/2008	9:00 AM	7:00 AM	22	25	33000
10/13/2008	8:00 AM	8:00 AM	48	25	72000
TOTAL'S			118		177000

LAGOON #3 PUMPED TO TRACT 8466 FARM 1729 11 2S 26

DATE	BEGINNING TIME	ENDING TIME	HOURS	GALLONS / MINUTE	TOTAL GALLONS PUMPED
5/22/2008	8:00 AM	4:00 PM	8	50	24000
5/23/2008	7:00 AM	6:00 PM	11	50	33000
5/24/2008	NOON	11:00 PM	11	50	33000
5/26/2008	6:00 AM	4:00 PM	10	50	30000
5/27/2008	7:00 AM	1:00 PM	6	50	18000
10/13/2008	2:30 PM	8:00 AM	65.5	50	196500
10/22/2008	8:00 AM	4:00 PM	8	50	24000
TOTAL'S			119.5		358500

GALLONS PER ACRE 3585

BLUE CREEK CATTLE FEEDERS

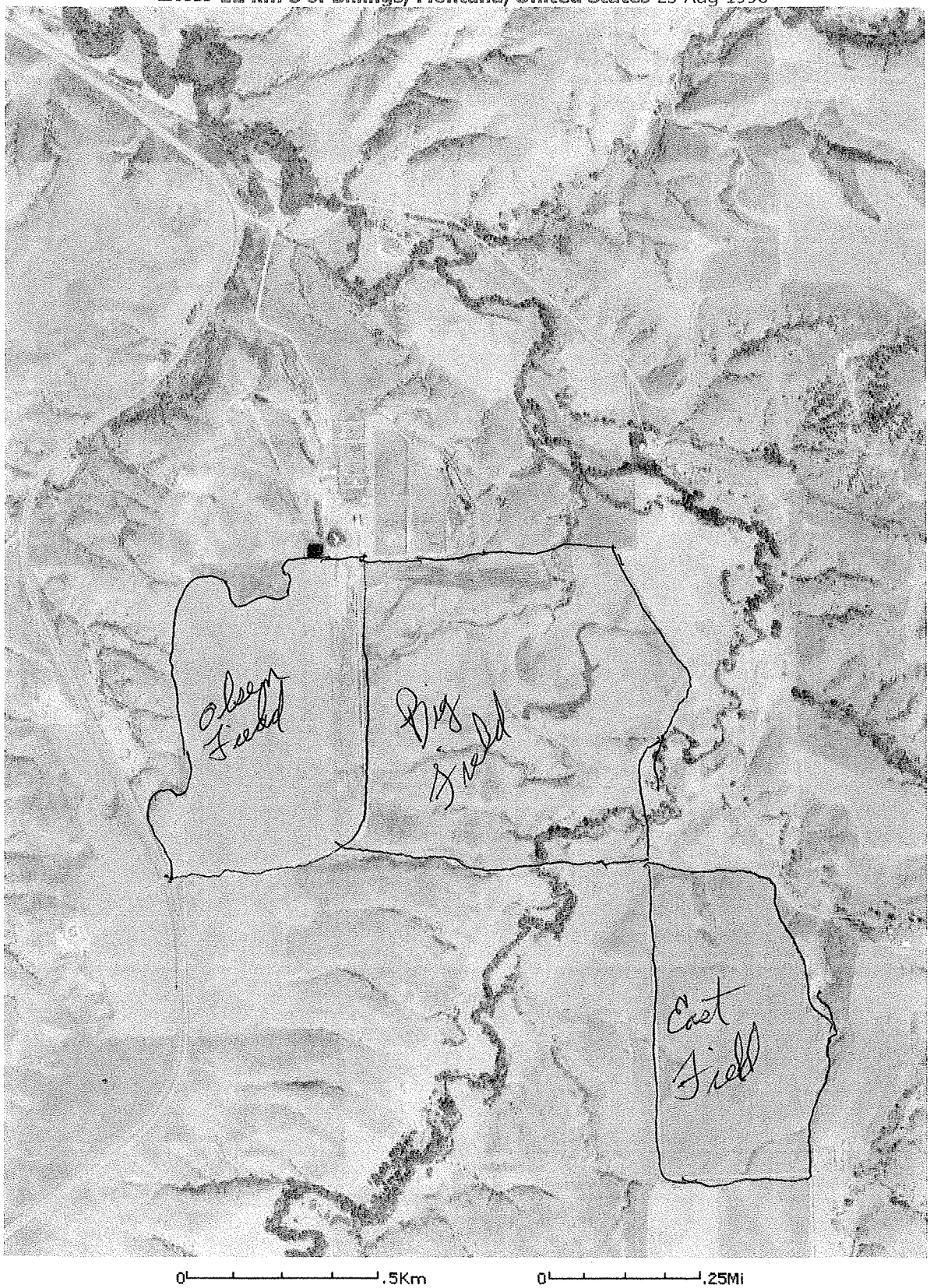
CATTLE MANURE CALCULATION IN LOT

MONTH	HEAD COUNT IN LOT	HEAD DAYS IN LOT	CATTLE WT IN plus CATTLE OUT WT
1/2008	237	88191	1293971
2/2008	225	52296	1858122
3/2008	1348	36396	2266023
4/2008	1174	58090	1082388
5/2008	234	70660	1019340
6/2008	257	41363	781318
7/2008	125	36218	498343
8/2008	1454	23790	2301208
9/2008	454	50149	1381787
10/2008	901	74193	1677706
11/2008	315	85357	964099
12/2008	647	85021	1794478
	7371	701724	16918783

16918783# / 7371 HD / 2 = 1148 AVG.
701724 X 54# = 37,893,096 / 2000 = 18,946.548 TONS

Blue Creek

USGS 12 km S of Billings, Montana, United States 23 Aug 1996



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USGS 11 km S of Billings, Montana, United States 23 Aug 1996

Image courtesy of the U.S. Geological Survey